RECLAMATION
Managing Water in the West

January 2013
Mid-Pacific Region

Conservation Connection

Change at the Helm

The Mid-Pacific Region welcomes David Murillo as Reclamation's newest Regional Director. Commissioner Michael L. Conner made this announcement in November 2012.

Mr. Murillo takes the place of outgoing Regional Director Don Glaser, who will move to Denver to work on several high priority projects for the Commissioner.

Mr. Murillo brings extensive knowledge of water and related resources policy; water and power system operation; and maintenance and ecosystems recovery to the Mid-Pacific Region. His work at several levels within our agency has demonstrated his ability to collaborate with the many partners and stakeholder interests of Reclamation.

David Murillo joined Reclamation in 2000 as the manager of the Yakima Field Office where he was responsible for the operation and maintenance of storage reservoirs, fish facilities and hydropower plants and the recovery of several salmon species. During his tenure at Yakima, he managed the office through two of the most severe droughts on record in the Yakima River.

In 2006, he served as the Power Manager at Grand Coulee Dam, the largest hydroelectric facility in the United States. In this position he managed the Grand Coulee and Hungry Horse dams and power plants. Grand Coulee Dam is the key feature of Reclamation's Columbia Basin Project in central Washington, a multi-purpose project which provides flood control, irrigation, hydropower production, recreation, and fish and wildlife benefits. Grand Coulee provides water for approximately 600,000 acres in the Columbia Basin Project and generates 19 billion kilowatt hours of power annually.

In this Issue . . .

David Murillo was named Deputy Commissioner for Operations in September 2010, where he oversaw operations in the Bureau of Reclamation's five regions, the Native American and International Affairs Office, and Technical Resources which includes the Technical Service Center, Research and Development Office, Power Liaison and Dam Safety Officer/Design, Estimating, Construction.

Prior to joining Reclamation he worked for the Departments of Defense and Energy on Nuclear Controlled Pure Water and Waste Tanks as well as Steam Plants.

Agricultural Water Management Plans (AWMP): Federal and State Working Together

Is your District one of the many that have to submit a State *AND* Federal AWMP every 5 years? Reclamation and the Department of Water Resources (DWR) are working together to allow *one plan to meet both agencies requirements*.

State legislation (SBx7-7) requires an AWMP to be adopted by December 31, 2012 and then submitted to DWR within 30 days of adoption. Another AWMP must be updated and adopted by December 31, 2015 and submitted to DWR within the 30 days of adoption. DWR is accepting Federal AWMP that are deemed adequate provided they meet the following conditions:

- Plan was submitted to Reclamation
- Board or City Council resolution is complete
- Notification in the Federal Register complete
- Federal plan finalized as adequate
- Final copy and resolution posted on the WaterShare website
- Finalization occurred within the last 4 years of State due date:
  - ⇒ For 2012, on or after January 1, 2009
  - ⇒ For 2015, on or after January 1, 2012

Three possible scenarios for federal contractors are:

1) If AWMP is finalized by Reclamation and meets the conditions above: District must submit the Federal AWMP along with additional documentation to DWR.

2) If AWMP is not finalized but a draft plan has been submitted to Reclamation and one is due to DWR:

- The District should submit the additional documentation to Reclamation to be included with the federal review process.
- The plan continues with the federal review process.
- Once the plan is finalized as adequate, meaning a final copy along with the resolution has been submitted to Reclamation, the plan has completed the Federal Register process without significant comments, and the plan has been posted on the WaterShare website, the District is responsible for sending all of the information to DWR to meet their state requirement.

3) If your plan is due to Reclamation and DWR:

- The District should submit a draft Federal AWMP along with the additional documentation required by the state to Reclamation.
- The plan will undergo the federal review process.
- Once the plan is finalized as adequate, meaning a final copy along with the resolution has been submitted to Reclamation, the plan has completed the Federal Register process without significant comments, and the plan has been posted on the WaterShare website, the District is responsible for sending all of the information to DWR to meet their state requirement.

Disclaimer: Although the additional documentation for the state is being submitted to Reclamation, Reclamation will review the documentation as an informational item, however Reclamation cannot review it for adequacy due to jurisdictional authority.

Key points:

- The district or contractor is responsible for submitting the plan and any other state required documentation to DWR.
- The federal review process which includes the public review process is acceptable to DWR provided the process meets all of the state law, which includes the following:
  - ⇒ Notification of AWMP preparation: Notifying all city or county that receives water from the district that the district will be preparing a plan or amendments to a plan.
  - ⇒ Public participation: Prior to adopting a plan, make the plan available for public inspection and hold a public hearing on the plan.
  - ⇒ Plan Adoption, Submittal and Availability:

    Adoption: the inclusion of the resolution with the plan.
    Submittal: submittal of the plan and all associated documents to DWR.
    Availability: the plan must be available for public review on a website or electronically submitted to DWR for

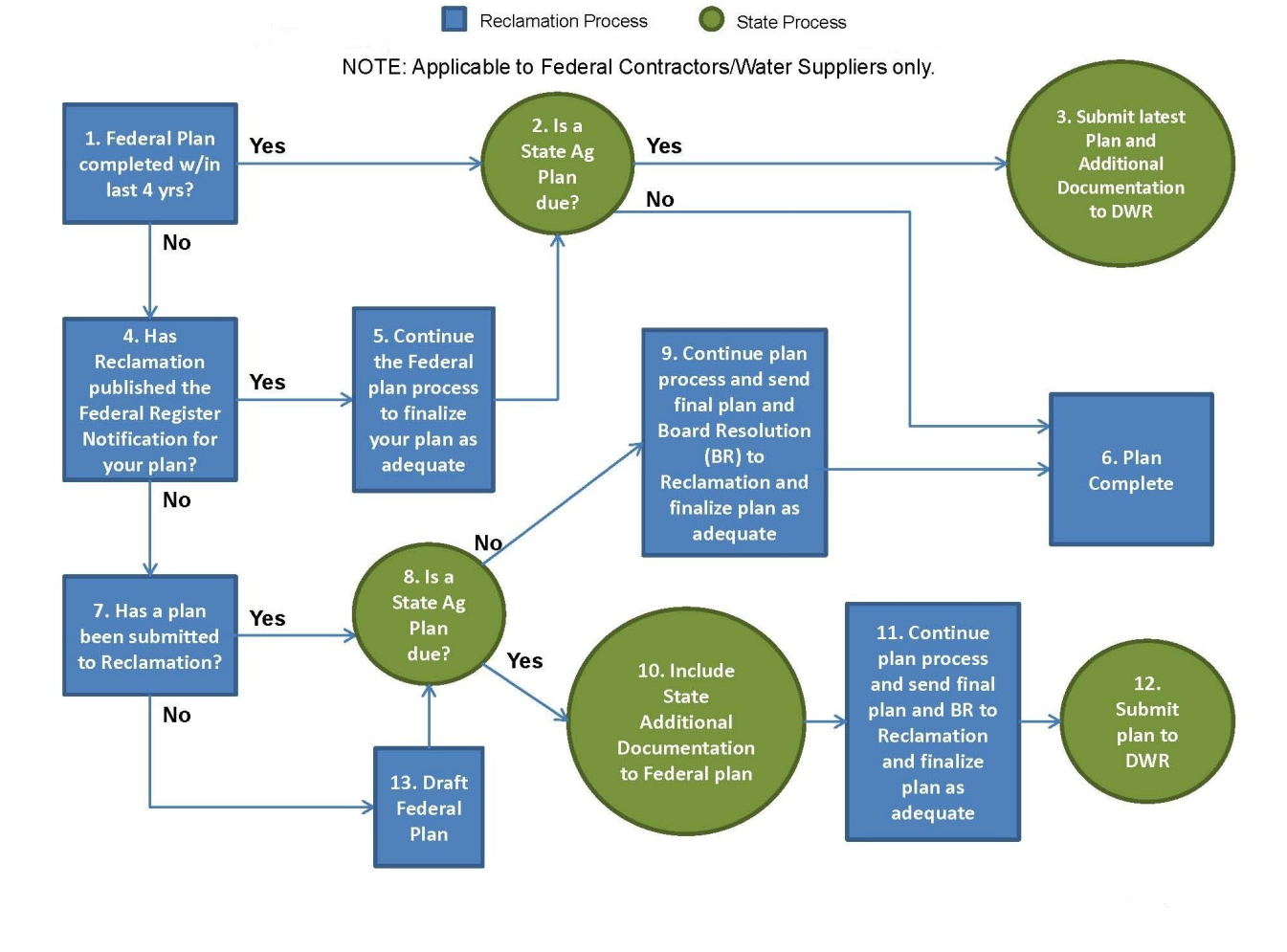
Continued from page 3 - Partnership

Plans will be accepted early by Reclamation and DWR to allow for flexibility for the districts. Due dates for the plan may not coincide, so if a Federal AWMP is due 2017 and a state plan is due 2015, Reclamation will accept the 2015 plan as the 2017 plan. Or the state will accept the 2017 plan for their 2020 plan.

For questions regarding Federal plans, check out the Water Management Planner on the WaterShare website at: http://www.usbr.gov/mp/watershare/index.html or you may contact Angela Anderson at 916-978-5215 or by email at aanderson@usbr.gov.

For questions regarding plans or the additional documentation for the State, go to Agricultural Water Conservation at: http://www.water.ca.gov/wateruseefficiency/sb7/ or view the draft guidebook at: http://www.water.ca.gov/calendar/materials/10_8_2012_ag_water_managemnt_plan_guidebook_14834.pdf or please contact Fethi Benjemaa at 916-651-7025 or by email at Jemaa@water.ca.gov.

PLANNING PROCESS FOR FEDERAL AG WATER MANAGEMENT PLAN



Reclamation and NRCS Grant Partnership

Beginning in 2011, Reclamation and the Natural Resources Conservation Service (NRCS) partnered to leverage funding opportunities for water delivery agencies and agricultural producers in the San Francisco Bay-Sacramento/San Joaquin Delta (Delta) region. The resulting collaboration is the first of its kind in the Region and is an important part of meeting the 2009 Interim Federal Action Plan for the Delta. The collaboration is unique since Reclamation has authority to provide financial assistance to entities with water or power delivery authority, including water districts and irrigation districts, whereas NRCS has the authority to provide on-farm assistance. This allows Reclamation and NRCS to provide complimentary funding opportunities and leverage limited resources and maximize benefits for water conservation in areas served by the Central Valley Project (CVP) and State Water Project (SWP). Through a competitive process, Reclamation has awarded over $6.3 million in grants since 2011 to ten irrigation districts so improvements that save water or improve water management could be made in the systems that deliver water to farmers. NRCS, in turn, provided $7 million to farmers in 2011 who receive water from those districts for on-farm conservation improvements throughout those ten districts. An estimated 370,000 acre-feet of water will be better managed or conserved annually as a result of these projects.

A recipient of one of these grants is South San Joaquin Irrigation District (SSJID) in Manteca, California. SSJID combined $1 million in funding with non-Federal funding to complete over $12.9 million in improvements to its water delivery system. In the past, growers experienced difficulties converting from flood to pressurized irrigation because of moss and algae in the water delivered by the District via open channel. Some of those growers also relied on groundwater, which was becoming more salty and difficult to pump due to decreasing groundwater elevation. Grant funding allowed the District to build a state-of-the-art, pressurized irrigation system, replacing open channels and incorporating automated controls and updated metering technology. “It really was a collaborative process between the District and growers to come up with solutions,” says Jeff Shields, the District’s general manager. “We worked together from the beginning to design the system in a way that worked for everyone.”

The improvements allow for precise measurement and accounting of water use and provide the District the ability to capture additional agricultural run-off for irrigation re-use. The District and NRCS have collaborated to convert approximately 10 percent of the 50,000 acres of land from flood irrigation to sprinkler or micro-drip systems resulting in significantly less on-farm water use, with additional on-farm work continuing. Project benefits include energy conservation, reduced air emissions and improved water quality. Early engineering analysis estimates 2,700 acre feet reduction in irrigation water needed annually to irrigate the lands in the project area in the first year after project implementation.

We anticipate this funding opportunity announcement to be advertised at the beginning of 2013. Please refer to www.usbr.gov/mp/watershare or www.Grants.gov for updated information. If you wish to be placed on an email distribution list for all future water conservation grant opportunities, please sign up under the ***“mailing list”*** tab in the WaterShare website. ♦

Water Footprint = Lifestyle Choices or Lifestyle Choices = Water Footprint

The United Nations Human Development Report (2006), estimates the daily average water use per person in America at approximately 575 liters or 151.9 gallons per day for drinking and personal hygiene. National Geographic's website states that the average American lifestyle consumes nearly 2,000 gallons of water each day. The surprising fact is that only 5% or about 100 gallons run through the tap, toilets and garden hoses of our homes. The majority of the water used on a daily basis goes to support the lifestyle we choose - through the foods we consume, the clothes we wear, the energy we use, the services we depend on, and more.

Consider a simple outfit composed of a pair of jeans and a cotton t-shirt. Cotton, the primary raw material used in both articles of clothing, is a water intensive crop with an average evapotranspiration (ET) of over 30 inches per year. Cotton production also uses fertilizers to increase yields and quality. According to the www.waterfootprint.org website, a pair of blue jeans requires about 1800 gallons of water from production of the crop to the finished product and a t-shirt requires about 400 gallons of water. Once again, the volume of water is hidden through various agricultural practices, manufacturing processes and environmental compliance. In addition to the high ET of the crop, management of fertilizer enriched drainage adds to the total volume of water required to produce the cotton. Processing of the cotton to produce the denim and knit fabrics include chemicals in the dyes and fabric treatments, thereby requiring additional water for treatment and water quality testing.

We can certainly go the route taken by the Emperor in Hans Christian Andersen's book *The Emperor's New Clothes* to reduce the water footprint of our wardrobe, but it is doubtful this lifestyle choice will ever be considered an acceptable social norm. The choices we make each day in how we get to work, what we'll eat for dinner, or even what we will wear will determine our water footprint. In the end, it all comes down to lifestyle choices and realizing there are always hidden water costs with every decision we make.

Sources:
http://www.data360.org/dsg.aspx?Data_Set_Group_Id=757
http://hdr.undp.org/en/reports/global/hdr2006/ Figure 1.2, Page 34
http://environment.nationalgeographic.com/environment/freshwater/water-footprint-calculator/

Your New Water Conservation Team Member in KBAO

Elizabeth Gregory is a Natural Resources Specialist in the Klamath Basin Office (KBAO) who recently assumed the water conservation responsibilities for the Klamath Basin. She joined Reclamation's KBAO in December 2010, following her graduation from California State University, Chico. She received her Bachelor's degree in Agricultural Business with a minor in Animal Science. Elizabeth says she enjoys coming into the office each day because she works with a great group of people One of the highlights in her new role as a water conservation specialist is the great opportunity to work with the irrigators and other stakeholders that KBAO serves.

Elizabeth is a newlywed, having recently exchanged vows with her husband in July 2012. In addition to becoming her spouse, her husband also became her business partner. They started their own cattle herd over the past year and enjoy working outside during their spare time and being a part of production agriculture. If you are in the Klamath Basin service area and need water conservation assistance, you can reach Elizabeth at egregory@usbr.gov or 541-880-2589.

Reclamation Financial Assistance Helps Fuel a Decade of Water Use Efficiency in California

Reclamation invested over $65 million in the state of California over the past decade to assist local water agencies and technical support groups to advance water use efficiency. In addition, local water agencies contributed approximately two times the funding as a result of these partnerships in the last decade to construct or implement approximately 300 projects.

A large percentage of the funding was directed at projects that improved agricultural water conservation; with an emphasis on improving the efficiency of districts' water delivery systems. Funding assistance allowed many districts to modernize older systems through the installation of Supervisory Control and Data Acquisition Systems (SCADA). Employing automated gates and water control structure in conjunction with SCADA systems allowed several districts to become more efficient in managing and delivering water. These improvements reduced operational spills which in turn reduced diversions from canals and rivers. Major financial assistance also helped agricultural water districts to line leaky canals, increase groundwater banking capacity, and improve water measurement capabilities.

Grant Assistance in the Mid-Pacific Region, 2001-2011

Category	*# Projects*	*Reclamation Funding*	*Cost Share*	*Total Funding*
Ag. Water Districts	140	$40,907,000	$85,765,000	$126,672,000
Ag. Technical Assistance	28	$4,181,000	$3,180,000	$7,361,000
Urban Water Agencies	124	$19,871,000	$39,796,000	$59,667,000
Water Education	4	$388,000	$1,023,000	$1,411,000
Totals	***296***	***$65,347,000***	***$129,766,000***	***$195,113,000***

Long Crested Weir

Grant funding also provided technical assistance to water districts and their farmers. These grants focused on education and training, providing entities such as universities and resource conservation districts (RCD) the ability to provide these services. Examples include Cal Poly ITRC which provided water use efficiency training for water district operators and farmers and North West Kern RCD which provided field irrigation efficiency evaluations.

Reclamation isn't all about agricultural projects, urban water purveyors also received funding for projects totaling almost $60 million. Major funding was dedicated to assist urban water purveyors to: 1) improve water metering, 2) install smart controllers to improve irrigation efficiency on large and small landscape and 3) fund high efficiency appliance rebate programs.

Through a recent survey, water agencies have identified several benefits derived from implementing these cooperative water use efficiency projects. Reported benefits include:

- environmental benefits through additional water retained in the river
- reduced energy consumption and chemical uses needed to treat wastewater before disposal
- increased labor savings due to automation
- conserved water and water better managed due to canal lining
- improved scheduling of landscape irrigations

ITRC Flap Gate

Several funding sources were available over the last decade to make all of these projects possible. These programs included the Regional Water Conservation Field Services and CALFED Bay Delta Programs, as well as the Reclamation-wide WaterSMART Programs (previous known as Water 2025 and Challenge Grants). Additional funding was provided as part of the American Recovery and Reinvestment Act of 2009.

Reclamation anticipates continuing its commitment to fund water use efficiency efforts in the future. Funding opportunities are advertised on the Region's WaterShare website www.usbr.gov/mp/watershare or at www.Grants.gov.

TRAINING OPPORTUNITIES

2013 Reclamation Mid Pacific Region Water Users Conference

http://www.watersusersconference.com

Date: January 23—25, 2013

Location: Eldorado Hotel and Casino, 345 North Virginia Street Reno, NV 89501

46th Annual Conference

2013 CII Conference

http://www.caii.org/index.php?option=com_content&view=article&id=93&Itemid=59

Date: February 4-5, 2013

Location: Sacramento Arden West Hilton, 2200 Harvard Street, Sacramento, CA 95815

51st Annual Conference

WEF 2013 Tour Dates

http://www.watereducation.org/toursdoc.asp?id=2570

March 20-22	Lower Colorado River
April 17-19	Central Valley
May 16-17	Flood Management
June 12-14	Bay-Delta
October 16-18	Northern California
November 7-8	San Joaquin River Restoration

ITRC 2013 Training Opportunities

Jan/Feb/Mar	Irrigation Dist. School of Irrigation
June 17-21	Ag Irrigation System Evaluation
Summer	Designer/Manager School of Irrg.
Summer	Flow Measurement Using ADVMS

Call ITRC office for more information - (805).756.2434

Saving Water and Dollars

In 2011, Niagara Conservation®, a leading manufacturer of water-saving and energy-saving products, teamed up with the Elsinore Valley Municipal Water District (EVMWD) in Elsinore Valley, CA, to create a pilot program helping local residents and business owners to save water by installing Niagara's ultra high-efficiency 0.8 gallon per flush (GPF) Stealth toilet. EVMWD, along with many other water agencies across California, are continuously searching for ways to save water without raising costs and many are now leveraging new, water-conserving technologies as an ideal solution.

Stealth Toilet

The Elsinore Valley pilot program was a free initiative, with EVWMD and Niagara providing up to two Stealth toilets, two Niagara Earth™ massage showerheads and a low-flow kitchen or bathroom faucet aerator to applying customers. The program began on January 27, 2011, as EVWMD installed 42 Stealth units in 21 homes, a Homeowners Association (HOA) clubhouse and a hotel. In two days, the Stealth toilets had completely sold out, after more than 2,500 installations were processed within the first 24 hours. At the end of the pilot program's three and a half month run, municipality residents saw an 11 percent decrease in their water bills.

Overall, the Stealth's savings are estimated at 118 acre foot (AF) per year and 2,347 AF over 20 years. In perspective, a typical suburban family uses approximately one acre foot (AF) of water per year. Over the course of the 20-year-life of the Stealth toilets installed, the total savings will be approximately $2,036,000 for the homeowners in the area who participated in the program.

"The Elsinore Valley pilot program was a great way for our customers and the world to see the extreme water conservation abilities associated with Niagara's Stealth toilet, Earth showerhead and aerators," states Carl Wehmeyer, Niagara Conservation's executive vice president. "We're extremely proud of our efforts. For more than three decades, our company's mission has been to help save water and energy. We're committed to constantly seeking new ways to push the envelope with new technology and water conservation methods."

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If you like to share an article on any water and energy savings product in future Conservation Connection newsletters, please contact Laurie Sharp—see contact information on page 8.

Reclamation Water Conservation Staff

Central California Area Office

Lucille Billingsley
Phone: 916-989-7121/Fax: 916-989-7208
Email: lbillingsley@usbr.gov
Pauline Calvillo *(Water Mgmt Plans)*
Phone: 916-989-7276/Fax: 916-989-7208
Email: pcalvillo@usbr.gov
Pete Vonich *(Grants)*
Phone: 916-989-7265/Fax: 916-989-7208
Email: pvonich@usbr.gov

Klamath Basin Area Office

Elizabeth Gregory
Phone: 541-880-2589/Fax: 541-884-9053
E-mail: egregory@usbr.gov

Lahontan Basin Area Office

Bryce White
Phone: 775-884-8392/Fax: 775-423-1056
E-mail: bwhite@usbr.gov

Northern California Area Office

Jake Berens
Phone: 530-934-1359/Fax: 530-934-7679
E-mail: jberens@usbr.gov

Mid-Pacific Regional Office

Angela Anderson
Phone: 916-978-5215/Fax: 916-978-5290
Email: aanderson@usbr.gov
Kevin Clancy
Phone: 916-978-5223/Fax: 916-978-5290
Email: kclancy@usbr.gov
Melissa Crandell
Phone: 916-978-5208/Fax: 916-978-5290
Email: mcrandell@usbr.gov
Gene Lee
Phone: 916-978-5219/Fax: 916-978-5290
Email: glee@usbr.gov
Laurie Sharp
Phone: 916-978-5232/Fax: 916-978-5290
Email: lsharp@usbr.gov

South-Central California Area Office

Contact any member of the Mid-Pacific Regional Office Staff listed above.

WaterShare Website:
http://www.usbr.gov/mp/watershare/

Conservation Connection

Water Conservation Center
Bureau of Reclamation, MP-410
2800 Cottage Way
Sacramento, CA 95825-1898